

We claim:

1. A system comprising:
an electrically actuated valve of an internal combustion engine;

5 a computer storage medium having instructions encoded therein for controlling said electrically actuated valve, said medium comprising:

code for determining a desired valve condition for a cylinder cycle;

10 code for determining an actual valve condition occurring during said cylinder cycle;

code for determining an error between said desired valve condition and said actual valve condition for said cylinder cycle; and

15 code for adjusting a desired valve condition of a subsequent cylinder cycle based on said determined error.

2. The system of claim 1 further comprising code filtering said determined error.

20 3. The system of claim 1 further comprising code for triggering said determination of said error during preselected conditions.

25 4. The system of claim 3 wherein said triggering code conditions include whether said determined error is greater than a threshold.

30 5. The system of claim 4 wherein said threshold varies as a function of engine operating conditions.

6. The system of claim 5 wherein said desired valve condition is a desired valve timing.

7. The system of claim 6 wherein said threshold varies as a function of engine speed.

8. The system of claim 7 wherein said threshold further varies as a function of desired valve timing.

9. The system of claim 8 wherein said desired valve timing is a desired valve opening timing, and said threshold varies with said desired valve opening timing.

10. The system of claim 8 wherein said desired valve timing is a desired valve closing timing, and said threshold varies with said desired valve opening timing.

11. The system of claim 8 wherein said determined error is stored in keep alive memory.

12. The system of claim 1 further comprising code for storing said error as a function of engine coolant temperature.

13. The system of claim 1 further comprising code for storing said error as a function of time since engine start.

14. The system of claim 1 further comprising code for storing said error as a function of a number of engine events from a start of the engine.

15. A system comprising:

a computer storage medium having instructions encoded therein for controlling electric valve actuation of an internal combustion engine, said medium comprising:

5 code for determining a desired valve condition;
 code for reading a sensor measuring said valve conditions;

 code for determining an error between said desired valve condition and said measured valve condition;

10 code for storing said determined error in keep alive memory, wherein said determined error is used to adjust said desired valve condition.

16. The system of claim 15 further comprising code
15 filtering said determined error.

17. The system of claim 15 further comprising code for triggering said determination of said error during preselected conditions.

20 18. The system of claim 17 wherein said triggering code conditions include whether said determined error is greater than a threshold.

25 19. The system of claim 18 wherein said threshold varies as a function of engine operating conditions.

20. A system comprising:
an electrically actuated valve of an internal combustion engine;

a computer storage medium having instructions encoded
5 therein for controlling said electrically actuated valve, said medium comprising:

code for determining a desired valve opening and closing timing for a cylinder cycle;

code for determining an actual valve opening and closing timing occurring during said cylinder cycle;

code for determining a first error between said desired valve opening timing and said actual valve opening timing and a second error between said desired valve closing timing and said actual valve closing timing for
15 said cylinder cycle; and

code for adjusting a desired valve opening timing and a desired valve closing timing of a subsequent cylinder cycle based on said first and second determined errors.

20 21. The system of claim 20 further comprising code for triggering said determination of said first and second error during preselected conditions.

22. The system of claim 21 wherein said triggering code
25 conditions include whether a combination of said determined first and second error is greater than a threshold.